SEQUENCE LISTING

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<110> Sun, Yongming
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      Chen, Sei-Yu
      Liu, Chenghua
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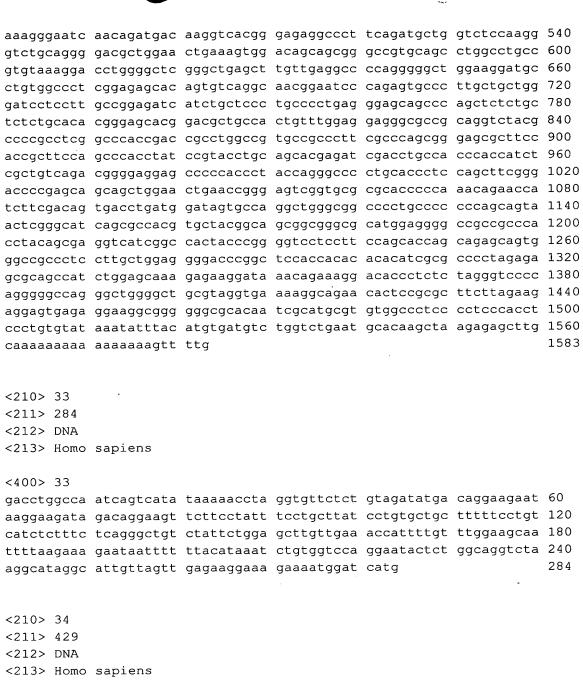
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ggcccaactc tagacctatg actcagagtc tgcattttaa cagatgtctg tgtgattcat 660
gtgcaggtta gagtttgaga aacacctgac ttttactgca gagaagatga gagaaggagc 720
ggagagggc aggcatggc aactgggtgc cccagccaca ttgctgacct ggcctggctg 780
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aaaaaaaaa gggcgg
<210> 37
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<212> DNA
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<213> Homo sapiens

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caatgtqqaq tcattqaaag gttcccagga aggaaaataa aaatccaaaa tcatgttata 180
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gaaaggtaac tcagccgggc accgtggctc atgcctgtgg tcc
<210> 38
<211> 256
<212> DNA
<213> Homo sapiens
<400> 38
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ctattctttt ttggtaaaac atgatcctag cctatctaat aatttaataa ttggatttta 180
aaaatttaac cattatatta tgggtaacct tacatgtcaa taaacaattc cacattgtca 240
                                                                   256
tgctttaaat ggctgc
<210> 39
<211> 524
<212> DNA
<213> Homo sapiens
<400> 39
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cacaattttt ttctttcctt ttgatcccaa aagaagaaaa tcatgacaat attctttcat 300
aaatccatta ttacactatt actatgacag gatattgtat gtgggaaata atgaagccat 360
ttgccgtctc ttccccagtt tcctttagag tttctgtgct gagcaaacct ccctgcgaag 420
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<210> 40
<211> 536
<212> DNA
<213> Homo sapiens
<400> 40
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ttcccagtgg atttcttcgc tccatagctt tatcattgga gatctggttg atcctgacgt 180
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agcgctcaag aaagcactaa atctgaaacg tttaaaaaacc aattcacgtc tcctgagaac 240

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qatqttqtat aacacaattt ttttctttcc ttttgatccc aaaagaagaa aatcatgaca 300
atattettte ataaateeat tattacaeta ttaetatgae aggatattgt atgtgggaaa 360
taatgaagcc atttgccgtc tcttccccag tttcctttag agtttctgtg ctgagcaaac 420
ctccctgcga agttaatcag atgctggact tcttccctca atcacaccag ttgcccaggg 480
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<210> 41
<211> 379
<212> DNA
<213> Homo sapiens
<400> 41
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cqtqtcaqat qctqqaqatg tcatttqcat tqccaqaqtt tqccaaqggt qcacacagaa 180
agcagattga aaagcaccct cttggaacat ctctccaatg ccttctactc acaaagttta 240
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aatcaagtgg gagtttggag tggataaccc aaatttggat aactggtgaa taataaaatg 360
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<211> 1215
<212> DNA
<213> Homo sapiens
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acacttgtga acctaatagc catatgaaga aaataacatt tctaatatct ttggatgccc 180
catgtactaa tgacagttat gcttttgcat tttcttgaat tttatgttta tttatctttc 240
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cagatgtaag gaattgctct tgtctccatg gtgaatttgg agcagccaat gaagagtccc 660
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gattgaaaag caccctcttg gaacatctct ccaatgcctt ctactcacaa agtttaacat 1080
cattaacacg tgacaaagaa gaactattta atgggcccag atctatttat gaagacaatc 1140
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<211> 754
<212> DNA
<213> Homo sapiens
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aagagacccc aaccgtcccc ttggccccct gccccgccgt tttgcagttt gccaaccttc 180
tagetagaca geceectaag teteegtgtt gegagtgaaa gagaattttt etattteate 240
ttcccattga ccgaagcaga aaaattgaac cgaatctacg ccccttgttc tgattcctgc 300
tagaggaaaa cagaaaatca teeegeaggt etettteagt eeetggatgg egagegeage 360
cctgggagge cacacttagt tetttattgt gaateteteg etactcaagt tegtteggga 420
ccaqqqcctc qqatqqcctc qgttqcccqt aagtacgcga aagaagaggt gaatccaatc 480
gctggcctag aggatagtga tcagacaacc cgaggattac taaacaaggg gcggcggtgt 540
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gatgcaaaga gtgagaaaga aagcgcagca tctggcagcc tgcttataaa tgcagccttt 660
cggaagatga aacttgcagt cttaggttgt cctcctttat atccatgttc caatcctctg 720
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<211> 955
<212> DNA
<213> Homo sapiens
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agwtcaatcg ctttacccta ggtagcctct tgttcagggc tcagggactc ctgtcttaag 180
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gctaaacaaa gagaccccaa ccgtcccctt ggccccctgc cccgccgttt tgcagtttgc 360
caacetteta getagacage eccetaagte teegtgttge gagtgaaaga gaatttttet 420
atttcatctt cccattgacc gaagcagaaa aattgaaccg aatctacgcc ccttgttctg 480
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cqttcqqqac cagggcctcg gatggcctcg gttgcccgta agtacgcgaa agaagaggtg 660
aatccaatcg ctggcctaga ggatagtgat cagacaaccc gaggattact aaacaagggg 720
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aatcctctgg gctttcctcg aaatgaataa aattgtggaa atgaaaaaaa aaaaa

aggeteetgg atgeaaagag tgagaaagaa agegeageat etggeageet gettataaat 840 geageettte ggaagatgaa aettgeagte ttaggttgte eteetttata teeatgttee 900

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<210> 45
<211> 503
<212> DNA
<213> Homo sapiens
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atttatttgg gggagaatta tgccaaatga caatattgtg tcttgccatc taggaatatg 180
agattttccc attttttcc agtctttttt atcaccttta gaaaagctat attgttttct 240
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tttatqaatq qaatattttt cattqtattt tctaattqtt tgctggacta tatggaaatt 360
qatttttqqc atqctqatat atccaqcaaa aaactttact gaactctaat gttttgtttc 420
tgagaggttt ctgatggtct gtttcttgca gggatgtctg aatcttccaa gtaaaaatgn 480
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<210> 46
<211> 206
<212> DNA
<213> Homo sapiens
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ttttggcccc cttcccttta ttttaactca taactgatac ttaaaggtgc tctgccttat 120
taaatcagct cctaggctgc aagtgcataa tatttaaaaaa tttgcaactt tgacttttta 180
                                                                   206
aaaatctggt cttggtatgg agcaac
<210> 47
<211> 394
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (93)..(119)
<223> a, c, g or t
<400> 47
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cagatgactg acaactgtta acttctcact atgtgccagg gactattgtg agttaactca 180
cttaatcctc atagccaccc tttgaggtac ctataattat tctatagatg aagaagcaca 240
qacaqaqaqq ttaattaaqa qcaaqtqttq qaqttqaact cctgatattt ccccctttaa 300
getgaagtee atgacetget teccaattee tggcagecae acagttgete tgenattttt 360
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cagtetteta aettteaaca tagttaettt ttae

394

gaagacacag

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<210> 48
<211> 135
<212> DNA
<213> Homo sapiens
<400> 48
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gccaggctgt gaaag
<210> 49
<211> 394
<212> DNA
<213> Homo sapiens
<400> 49
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qtactetgat ecaggageae etectaggta gteaggettt aaaataaaat cacaeteate 120
cctqacaqtc tqqcaqaata tqtqcatqcc caaqqttata ccctctctqq actqaqtqca 180
qtatqaaqat ccaactatta qtcctqqctq aatqgqaagc caaaatataa actccttcag 240
ctttgatage aatetgeaag teacataaca ttteeggtgg ceattagggt gagetttaag 300
atctaactgg ccaagggggc ttaagtacaa tctttgatca gtaagtggct tatgcctacc 360
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cagagacage ceetcagtag ecaggetgtg aaag
<210> 50
<211> 730
<212> DNA
<213> Homo sapiens
<400> 50
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acaggaacag tgcctatggg tttaattagt gcttagttgt tttgttttgc tccttcattt 120
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agtcaaggca gaatctatag gcagtgccta ggaacacaga cgcatttcag atggtgagga 660
aaaagcaagt gaagcacaca atttgaatct tggaaatata ctttgaatcc atggggttta 720
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<211> 406

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<210> 51
 <211> 953
 <212> DNA
 <213> Homo sapiens
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 qqqqccaaac tqqaqtqaaa gcccqaccac cgtgtctcac agggaaactg acaccagatg 360
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· tgagtcacag tgactatata actcttactc ccacttttgg gacacttttt gagagggaac 780
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 <210> 52
 <211> 527
 <212> DNA
 <213> Homo sapiens
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 <221> unsure
 <222> (224)..(365)
 <223> a, c, g or t
 <400> 52
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 atggccagtt taaggccgta atgtctaaat gggcaactat gctaacaata aaaaaagaac 180
 attgaggtct attaatactg ttcacaaata tggtgggttg tttnnnnnnn nnnnnnnnn 240
 nnnnntcacc aatttacttt aacaatgcag agagaaagat ccattaacgt aagtgtttgg 420
 atqaqttqaa catqtqaaat ataqattatt aaaqtattqa atqcatttta gatqtqggtt 480
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 <210> 53
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aagtaangga ct

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<212> DNA
<213> Homo sapiens
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<221> unsure
<222> (308)
<223> a, c, g or t
<400> 53
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qqtqaqaaac aqcaqqtatc caatattctg aaggatggca ttctggggtt gcctaggtta 120
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agatgtgncc tgtctatgga actgtactag atgttgaagg aggtgtacct agaaatattc 360
                                                                   406
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<211> 372
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (293)
<223> a, c, g or t
<220>
<221> unsure
<222> (304)
<223> a, c, g or t
<220>
<221> unsure
<222> (367)
<223> a, c, g or t
<400> 54
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acqtatcgcc taatacataa ttcttgtcat tagatgattt ttcctgtaaa ggngctaata 300
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372

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<211> 537
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<221> unsure
<222> (214)..(326)
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agtgcagatc tagaagaaca aacacaactg gtaacagagt tacctggggg aaggttgagt 420
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<210> 56
<211> 847
<212> DNA
<213> Homo sapiens
<400> 56
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gcactaaaat cagttcaagg atgccaatcc ctaattggcc aaatagcctt accattcttg 180
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ttacatgagg ctcaggttcc ttacctgtgt gtaaaatggg aacattgaac taggtgatct 780
ttaagatccc ttccgggtct aaaattgttt gacattatct tggtggtcag taactgtgag 840
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agagetggaa aatattggte tetgagttat ageaeaggge agagaaggge agaaaatgea 180
cctgaaagaa aacaggcaag tgacctatat accttctttt aggccttctc cctcttgtgt 240
accycatage atattaagty taaaattatt ataacactca ttytatcacy tyyctytytt 300
ttgcttacat atccatctca acttttatct cttgctttcc ccagcaccag cactggcaca 360
ttqcaatttt tqaacaaaag atttttqaac taatgaataa ataggtgatt agatttaatt 420
caatttcaat gaatgtttat taggtcatta ttaggatatt gggtcagaat gttctagttg 480
attotacata catcacotoo ttoatagagt atootgaaag goocacaatt cactogoaca 540
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                                                                   586
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<211> 610
<212> DNA
<213> Homo sapiens
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ccttcttgaa atccaggaaa caagagagct ggaaaatatt ggtctctgag ttatagcaca 180
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ttccccagca ccagcactgg cacattgcaa tttttgaaca aaagattttt gaactaatga 420
ataaataggt gattagattt aattcaattt caatgaatgt ttattaggtc attattagga 480
tattgggtca gaatgttcta gttgattcta catacatcac ctccttcata gagtatcctg 540
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                                                                   610
agtattatca
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<211> 595
<212> DNA.
<213> Homo sapiens
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ttccttatat qaactatact actgaatagc caaatagatg aggggaagta tctttttgta 120
atagtattot aactaatcaa ttaaaaagtg aaaataattt ttcagttott attaaatgga 180
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<222> (778)

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tccaqactat qqqaaqcttq tcaqgtcaaa gggcccaggt tctttaaagc agaacttgtc 420
aggaaatggg tggaggaagg accaatagat taagacattc aagaaatatc caatttttta 480
atggatgaga ctaaaaaact gtgttcaagg atgcacattt gagtgacaaa actctgaaaa 540
gacccaagga agtgattact attaaagtca aaacaacagt tggttatggt aggag
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<211> 810
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (329)
<223> a, c, g or t
<220>
<221> unsure
<222> (691)..(752)
<223> a, c, g or t
<400> 62
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ttccttatat qaactatact actgaatagc caaatagatg aggggaagta tctttttgta 120
atagtattot aactaatcaa ttaaaaagtg aaaataattt ttcagttott attaaatgga 180
tggacattaa acatcagtag ctactaagat tgcaaagtca gtcaaacatt agctatggat 240
qttataqatq tcccaaaqqa atcaqtcctq aatttgattc agtctcctgg atctagctgc 300
ctatgacagg aaataaagaa taacatgtng gattgcagca tgagtatgta atctgcaaaa 360
tccagactat gggaagcttg tcaggtcaaa gggcccaggt tctttaaagc agaacttgtc 420
aggaaatggg tggaggaagg accaatagat taagacattc aagaaatatc caatttttta 480
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agtattgtat aggcatgggt agtatcgcac agttaaaata actcattaag ctaagtatat 660
ttgtatttgt ttgctgtatc tgttttattt nnnnnnnnn nnnnnnnnn nnnnnnnnn 720
nnnnnnnnn nnnnnnnnn nnnnnnnnn nnggccgagg tgggctagat ctacctgtag 780
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<210> 63
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<212> DNA
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<221> unsure
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qtaqcatttq ttcctttqaa aatqatqctc ctttcccatt ttttagtaat tgaagaggat 180
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aacgcatggg aggggaaatt tgggaccagg accttttaca tgctggggga aactgacagg 420
actcagtgag gaaagacttt tgtttgtgtt ttcttctctc tctttctctg cagagcgcat 480
gatctatate aacatgette etggteatae taaagaatet eagetagtgg tgatetacea 540
gtttctgtga ggattattac tgtattaatg cattttggga ggtgttcatt cagttcagag 600
tgaatgettt ggaagacatt geacagettg aateatgggg cateagggat agettgaett 660
ttcctgaagg atgtatggtg gccatagact agttggttgg aagcttgcat tctgtaagcc 720
tggtatcaaa tgcacacatt aagccatgtt ttcctaacag aatgaacatt ttttacannn 780
nnnnnnnn nnnnnnnnn ngctcagaac cttagaacag gatgatatca tcagaaagaa 840
taagggaaag taggccagaa ttagaaaaca tcaagatcat tggaaaactg ctatacttgc 900
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ttgcagcaga caaaattgtg acatattatt gctaaggaga ttgacaactc ataagaataa 1080
atattqtctq tqqqcaaqat ttttttqttt qtttccagag aacattatta atttcagatt 1140
atattaaaga cttacatggc aggagacttt cttctagata actaaaaaca ctgcgtagaa 1200
                                                                  1215
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<211> 1841
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (774)..(797)
<223> a, c, g or t
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tattgcagat agtttcacag gtcacagaac cttaaaaaagg atttaaaggg catgtcttgt 120
gtagcatttg ttcctttgaa aatgatgctc ctttcccatt ttttagtaat tgaagaggat 180
agaaaggttt totoattgot tacgtttoac tgaattotot gcagococtt ttoccacaga 240
tgtttcagcc aaacctgtat ggagggaggt gacatggcat ggcttgctgt ttaaaaacagc 300
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tacggtattt tgtgcttccc ttttgagtgt gtcaaggtga acaaaaggag agcctctaga 360

<400> 66

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tatatcaaca tqcttcctqq tcatactaaa gaatctcagc tagtggtgat ctaccagttt 540
ctgtgaggat tattactgta ttaatgcatt ttgggaggtg ttcattcagt tcagagtgaa 600
tgctttggaa gacattgcac agcttgaatc atggggcatc agggatagct tgacttttcc 660
tgaaggatgt atggtggcca tagactagtt ggttggaagc ttgcattctg taagcctggt 720
atcaaatgca cacattaagc catgttttcc tagcagaatg aacatttttt acannnnnnn 780
nnnnnnnn nnnnnnngct cagaacetta gaacaggatg atatcatcag aaagaataag 840
ggaaagtagg ccagaattag aaaacatcaa gatcattgga aaactgctat acttgcattg 900
cttcctcctt ggttcattgt acaatggcct taattcaggt gacattgcaa gtacctttgg 960
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taaagactta catggcagga gactttcttc tagataacta aaaacactgc gtagaaagtt 1200
atactatgtt tggccgggag cggtggctca tgcctgcaat cccaacactt tgggaggcca 1260
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attttcctca agtagcgcta gctgcaatgg ttacattgcc catgaaggac ctacctcagc 1440
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tgtcagacca ggttattgga ggccaccgtg ctgtcacctt cctctgccaa gtccaggccc 1560
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aaaagcaacc acccagggca ggatgccacg ggacagggga gcataagcaa ctgaaaatga 1740
ageggecaea aggecagage ttggeteaea etcagaatte gecaeeetae eateteetge 1800
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<210> 65
<211> 257
<212> DNA
<213> Homo sapiens
<400> 65
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taaaatagat gtaagggttt taaagtgagc aacaatctct aggagccaga tttttgagtt 120
ttctctccca aagctgcttt tcccctagtc ttctccatct tagtgaatgg caacttcact 180
cttccagatg ctcacaccaa acaccctgaa atcactcttg attctttctc ttatacccca 240
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cattaaattc ctcagca
<210> 66
<211> 327
<212> DNA
<213> Homo sapiens
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31

caggcagtga tgcgaggtga tctagaggat cccgataccc attatgtgcg tgatcatagg 60 catgagccac catgcctggc cttccacatg aaatttaaag tcagcttctc aatttctatt 120

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qttttqqttc taaaatagat gtaagggttt taaagtgagc aacaatctct aggagccaga 180
tttttqaqtt ttctctcca aagctgcttt tcccctagtc ttctccatct tagtgaatgg 240
caacttcact cttccagatg ctcacaccaa acaccctgaa atcactcttg attcttctc 300
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ttatacccca cattaaattc ctcagca
<210> 67
<211> 487
<212> DNA
<213> Homo sapiens
<400> 67
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cctgtctgga ggatgacttt ttgtctttta aagagagaag ctgtactact tctactgtac 120
caqaaattca tctgagagca ggttactttc tcattgtaaa gtccatgcaa gccagataaa 180
cctatagggt agcacttcct taattagttt acaatttctg aggataggtt ggtgggagta 240
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taatcccagt aagctatggt tggggtctat gtataggaat gtgcaccctg aaattcattc 420
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<210> 68
<211> 1006
<212> DNA
<213> Homo sapiens
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<221> unsure
<222> (317)..(479)
<223> a, c, g or t
<400> 68
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tatacattta actaagtaca aatataaatg tgcctaagag gtaagcttca aatggaattg 180
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ttctcattgt agtctccttt atgaaacgtg tgtgcatagc ctgtctggag gatgactttt 600
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gttactttct cattgtaaag tccatgcaag ccagataaac ctatagggta gcacttcctt 720
aattagttta caatttctga ggataggttg gtgggagtaa actgcctctg agtgttcact 780
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tctctgggaa ctgtcccgtc tgttgttgtg tatcatatgt tctagtgcat tttttttcag 840

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1006
ttgagcatct actaagtgtt agggcactct ctgtggtcag atatat
<210> 69
<211> 126
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (70)
<223> a, c, g or t
<400> 69
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ccaaga
<210> 70
<211> 448
<212> DNA
<213> Homo sapiens
<220>
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<222> (364)
<223> a, c, g or t
<220>
<221> unsure
<222> (377)
<223> a, c, g or t
<400> 70
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aaaaagagaa gactcagatt aatacctcag gcatggaaaa gggagcgaga ctctgtctca 120
aaacaacaac aacaaaaaga tacaagcaaa acaaatcaag aaacgtatac aaaggattat 180
acaccatgac caagtgggat ttatcccagg aatacaaggt tggtttaata tttgaaaatc 240
aatcgatgaa acacacaaaa ttgagagaat aaagatgaga agcttaatgt agggtaaaat 300
qtctqaaqct ctaaqtqaaa ctqttqataa qctqqqqttt ctactcttgg aacgctagag 360
aggnagagac acttagntac ttagtaacag caaaaagccc ggccaaaaag tagaactcaa 420
                                                                   448
gtgctttaga aactctgtgg gcaggggt
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ttatgtcctt tcccacaaag cagtttggtg taaccactgt aatcccagta agctatggtt 900 ggggtctatg tataggaatg tgcaccctga aattcattca cttattcagc acaattttat 960

<210> 71

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<211> 91
<212> DNA
<213> Homo sapiens
<400> 71
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<210> 72
<211> 401
<212> DNA
<213> Homo sapiens
<400> 72
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tgagactagg ctttaaccag tgggctgaga gttaaagtga tttttgccat tctgttttta 180
ggaatggatg tgtctgcctg tggcagatta tatttttcaa agatgaccac aaaaatatct 240
cctatctcat qtqtqattct acagtqqqqt ctatqtcccc tcttcttgaa tgtqtqtqca 300
cttgtgactg ctttgactaa cagagtatgg ggtaggatgc catgtgactt ctgaggctgg 360
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gtcacggaaa gcaattgtta taagttaaat tgcatgtccc c
<210> 73
<211> 422
<212> DNA
<213> Homo sapiens
<400> 73
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ccttgcagct aagtggggcc atgagactag gctttaacca gtgggctgag agttaaagtg 180
atttttgcca ttctgttttt aggaatggat gtgtctgcct gtggcagatt atattttca 240
aagatgacca caaaaatatc tcctatctca tgtgtgattc tacagtgggg tctatgtccc 300
ctcttcttga atgtgtgtgc acttgtgact gctttgacta acagagtatg gggtaggatg 360
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CC
<210> 74
<211> 471
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (392)
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<223> a, c, g or t
<220>
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<222> (459)
<223> a, c, g or t
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cagaaagttc tgtttcacca gatcatgttt acagatagag tatgaggcat tgatccatga 180
tgctaaaaca ctgcaaagag gcagacagaa atccctaccc tgatggaatt ggcgttctgt 300
gacacctctc taagtgtgtg cccccttccc tagtgctgtg acttacaatt ctttttaaag 360
ccattattat tctggagaac ccaaggattg cntctttctc agagctctaa tgtcaataac 420
cctatcattc tttgtcatag actttgcgaa ctgagggant cacatttaat g
                                                               471
<210> 75
<211> 214
<212> DNA
<213> Homo sapiens
<400> 75
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ctcccctaaa tttttcccac tggttgaaga gagatctgga tgactaaacc tcccatcttg 120
acaccttgga gtttgttaag caggtcccct ctctgtagct tccaaagcca tgaagaaggg 180
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<210> 76
<211> 214
<212> DNA
<213> Homo sapiens
<400> 76
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agggtaatgt gtgtaaaggg ccaaacaagg ccccacacag ttaaggactt aatcctgccc 120
ggccccggga gggcttccgg catcttgggg ttcccctcaa aggatggcct gggcaggact 180
                                                               214
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<210> 77
<211> 552
<212> DNA
<213> Homo sapiens
<220>
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<221> unsure
<222> (273)..(357)
<223> a, c, g or t
<400> 77
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ccaqqcctct qaqqaqcttq qtttqqaaaq cqctqqaatq ctqqaccaaq ttccctctct 180
ggctccctga gagggggtct tctagcccca gtcttagggc aagaggagcc cgtcccctag 240
qaqcctccag qccctggagc cagacatcgg gcnnnnnnn nnnnnnnnn nnnnnnnnn 300
agacgctaat gtcaccctgg aaggtgtttt gaagggtaat gtgtgtaaag ggccaaacaa 420
ggccccgcac agttaaggac ttaatcctgc ccggccccgg gagggcttcc ggcatcttgg 480
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<213> Homo sapiens
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<223> a, c, g or t
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aatgacagct ataaatccaa cttatatcaa acataacatt aaatgtgaat ggattaagga 360
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<213> Homo sapiens
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<213> Homo sapiens
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<223> a, c, g or t
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<213> Homo sapiens
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<213> Homo sapiens
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<210> 108
<211> 979
<212> DNA
<213> Homo sapiens
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<211> 668
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<222> (583)
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<223> a, c, g or t

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<211> 1112
<212> DNA
<213> Homo sapiens
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<221> unsure
<222> (17)
<223> a, c, g or t
<220>
<221> unsure
<222> (27)
<223> a, c, g or t
<220>
<221> unsure
<222> (59)
<223> a, c, g or t
<220>
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<222> (1027)
<223> a, c, g or t
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cttcagatag ggattcattt gttgatattt tctttcttct ctcccctgct aacataaaca 420

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<222> (944)
<223> a, c, g or t
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<212> DNA
<213> Homo sapiens
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<211> 393
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (163)
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<223> a, c, g or t

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<221> unsure
<222> (191)
<223> a, c, g or t
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<221> unsure
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<222> (95)..(291)
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<213> Homo sapiens
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<400> 116

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tttatggcca aaaatggatg aatagctcag taaatgacgg ttctctgcaa gcgatgtaat 240
aqtatqcaqt caqtaaqcaa atacaqaaqa tactaaqttq caacattaga atatataata 300
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<211> 149
<212> DNA
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tgctgtggta caatggggtc tcctaggca
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acagaacatg tactggaatt gtttgtgtgt ggagtaaagg cagctgtttg tagccatcta 180
gttgggaact gtctttcctt ggatagttag ctactctgtt ggtgtgtggt gtaacactta 240
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gcaggtaatg atcttggaaa gaccaacttc tgttaatgta atccacaatc tagtgagggg 360
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 ccagtgtgat aatgctagca tagcagcaga acaggggctg cacaaacaca aagaaggaac 420
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 ataagacaga cgtagttett getetegagt geteatggte caatgaggga gacagagggt 360
 gactgggaac aacagtccag tgtgataatg ctagcatagc agcagaacag gggctgcaca 420
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cctaccttca aaacttgtag tttaaagtgg taacttgaat actcacattt acctctgttt 720
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getttacece etagtttttt gtttttttt teteetgtet acetggaget gagaggttat 420
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attagtaagg gaataatgtt attcattgcc tttttttcgt tgagttatga aagctcttcg 360
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                                     10
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Arg Asp Cys Lys Ile Arg Lys Tyr Ile 35 40

<210> 138

<211> 47

<212> PRT

<213> Homo sapiens

<400> 138

Met Val Thr Leu Gln Met Pro Ser Val Ala Ala Gln Thr Ser Leu Thr 1 5 10 15

Asn Ser Ala Phe Gln Ala Glu Ser Lys Val Ala Ile Val Ser Gln Pro 20 25 30

Val Ala Arg Ser Ser Val Ser Ala Asp Ser Arg Ile Cys Thr Glu 35 40 45

<210> 139

<211> 55

<212> PRT

<213> Homo sapiens

<400> 139

Ile Gln Asp Lys Asp Ser Val Asn Met Val Thr Leu Gln Met Pro Ser 1 5 10 15

Val Ala Ala Gln Thr Ser Leu Thr Asn Ser Ala Phe Gln Ala Glu Ser 20 25 30

Lys Val Ala Ile Val Ser Gln Pro Val Ala Arg Ser Ser Val Ser Ala 35 40 45

Asp Ser Arg Ile Cys Thr Glu 50 55

<210> 140

<211> 47

<212> PRT .

<213> Homo sapiens

<400> 140

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Phe Phe Pro Phe Gly Phe Leu Thr Phe Gln Lys Met Lys His
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Leu Ser Pro Arg Arg Gly Trp Gly Thr Gln Asp Glu Ser Leu Gly Ser
             20
                                25
Leu Trp Tyr Gln Ile Leu Asn Ile Pro Ser Leu Leu Asn Ala Thr Leu
         35
                             40
                                                45
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    50
                        55
                                             60
Ser Leu Gly Pro Val Pro
65
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1 5 10 15

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Tyr Leu Thr Pro Thr Asp Tyr Thr Phe Phe Ser Ser Ala Cys Gly Thr 35 40 45

Phe Ser Arg Ile Asp His Met Leu Ser His Lys Thr Ser Leu Asn Lys 50 55 60

Phe Leu Lys Ile Gly Ile Ile Gln Ser Ile Phe Ser Asp His Lys Arg
65 70 75 80

Ile Lys Leu Glu Ile His Thr Lys Arg Asn Phe Gly Asn Tyr Thr Asn 85 90 95

Thr Trp Lys Leu Asn Met Leu Leu Asn Asn Tyr Trp Val Asn Glu Glu 100 105 110

Ile Lys Met Glu Ile Ala Lys Phe Leu Lys Thr Asn Arg Asn Gly Asn 115 120 125

Ala Thr Tyr Gln Asn Met Trp Asp Thr Ala Arg Ala Met Ala Arg Gly
130 135 140

Asn Leu Thr Val Ile Asn Ala Tyr Ile Lys Lys Val Val Glu Ile Phe 145 150 155 160

Ala Ile Lys Asn Leu Ser Met His Leu Lys Glu Leu Glu Lys Gln Lys 165 170 175

Gln Thr Asn Pro Gln Ser Ser Arg Gln Lys Glu Ile Met Lys Ser Arg 180 185 190

Ala Asp Gln Asn Glu Thr Asp Lys Lys Thr Ile Gln Arg Val Asn Glu 195 200 205

Met Lys Ser Cys Phe Phe Lys Lys Ile Asn Lys Ile Asp Asn Pro Leu 210 215 220

Ala Ala Leu Thr Lys Lys 225 230

<210> 144 <211> 149 <212> PRT <213> Homo sapiens <400> 144 Met Tyr Gln Leu Ar

Met Tyr Gln Leu Arg Leu Val Thr Leu Phe Gln Ile His Met Lys Gly
1 5 10 15

Ala Ile Pro Leu Lys Leu Phe Thr Asp Val Leu Cys Lys Arg Trp Ser 20 25 30

Thr Lys Glu Thr His Gln Met Gly Glu Ala Asp Pro Gly His Ala 35 40 45

Gln Arg Glu Gln Leu Gly Thr Trp Ala Gly Ile Gly Lys Lys Val Val 50 60

Gln Arg Ala Arg Pro Gly Pro Ala Leu Ser Gly Gly Ser Gly Gly Leu 65 70 75 80

Cys Leu Ser Ala Leu Pro Pro Gly Leu Pro Pro Met Thr Val His Pro 85 90 95

Cys Arg Asn His Leu Arg Pro Pro Thr Pro Thr Pro Ala Pro Leu Gly
100 105 110

Ser Tyr His Leu Pro Phe Pro Pro Ser Ser Leu Ser Pro Thr Lys Ala 115 120 125

Ser Leu Cys Phe Leu Glu Ala Ser Ile Thr Gly Ser Cys Pro Gly Pro 130 135 140

Ser Trp Gly Thr Arg 145

<210> 145

<211> 31

<212> PRT

<213> Homo sapiens

<400> 145

Met Gly Trp Asn Glu Glu Glu Gln Ser Cys Pro Pro Val Pro Gly Gly
1 5 10 15

Thr Val Ser Arg Lys Ile His Thr Tyr Leu Lys Leu Gln Lys Gly $20 \\ 25 \\ 30$

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<210> 146
<211> 106
<212> PRT
<213> Homo sapiens
<400> 146
Cys Gly Trp Trp Thr Gly Met Pro Gly Ser Ser Pro Gly Ser Leu Leu
Pro Ser Asn Arg Leu Ser Leu Val Pro Leu Val Pro Ser Ala Ser Met
             20
                                 25
Thr Arg Leu Met Arg Ser Arg Thr Ala Ser Gly Ser Ser Val Thr Ser
                             40
Leu Asp Gly Thr Arg Ser Arg Ser His Thr Ser Glu Gly Thr Arg Ser
     50
                         55
Arg Ser His Thr Ser Glu Gly Thr Arg Ser Arg Ser His Thr Ser Glu
                                          75
                     70
Gly Ala His Leu Asp Ile Thr Pro Asn Ser Gly Ala Ala Gly Asn Ser
                                      90
Ala Gly Pro Lys Ser Met Glu Val Ser Cys
            100
                                 105
<210> 147
<211> 72
<212> PRT
<213> Homo sapiens
<400> 147
Met Ser His Gly Ser Gly Trp Gln Cys Tyr Ser Pro Met Asn Thr Asp
                                      10
His Ser Ser Asn Thr Gly Asp Trp Ser His Thr Ala Thr Phe Leu Ser
             20
                                  25
Arg Gln Arg His Lys Thr Arg Lys Asn Arg Thr Thr Leu Arg Ala Val
```

35

Met Trp Glu Cys Gly Pro Ser Tyr Asn Thr Gln His Gln Asn Trp Thr 50 55

Leu His Leu Lys Gly Phe Lys Thr 65 70

```
<210> 148
<211> 24
<212> PRT
<213> Homo sapiens
<400> 148
Met Glu Gly Pro Thr Asn Arg Ser Ser Leu Glu Pro Pro Glu Glu Ala
                                      10
Gln Pro Ser Gln Gln Phe Gly Arg
             20
<210> 149
<211> .70
<212> PRT
<213> Homo sapiens
<400> 149
Met Leu Asp Leu Leu Ile Val Phe Arg Ile Lys Ser Lys Leu Leu Lys
                                      10
Met Ala Phe His Asp Leu Val Ser Pro His Gln Asn Ala His Thr Met
                                                      30
             20
                                 25
Leu Leu Thr Pro Ser Gln Leu Trp Leu Pro Ser Thr Cys Ser Ser
         35
                             40
                                                  45
Gln Ala Ser Thr Ser Phe Leu Val Ser Ala Val Leu Leu Ser Pro Pro
     50
                                              60
                         55
Ser Leu Leu Ser Pro Gly
 65
                     70
<210> 150
<211> 46
<212> PRT
<213> Homo sapiens
<400> 150
Met Ser Thr Cys Phe Leu Ala Ser His Gly Asn Ser Cys Leu Leu Cys
 1
                  5
                                      10
Ser Phe Ser Ile Ile Ser Leu Leu Leu Ala Ser Lys Glu Ser Phe Val
```

20

25

```
Gly Ile Leu Pro Ser Ser Ser Tyr Leu Leu Cys Lys Ile Thr
         35
                              40
                                                   45
<210> 151
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<211> 40 <212> PRT <213> Homo sapiens

<400> 151

Met Glu Arg Phe Lys Glu Arg Gly Arg Gly His Gly Ala Phe Met Pro 5 10

Ser Pro Gly Thr Leu Pro Ser Arg Asn Leu Gln Thr Val Gln Leu Ser 25 20

Gly Ser Ser Leu Asn Leu Val Ile 35

<210> 152 <211> 32 <212> PRT <213> Homo sapiens

<400> 152

Met Leu Gly Ser Glu Cys Leu Leu Phe Met His Leu Leu Lys Lys Leu 15 5

Leu Gln Gly Asn Lys Lys Arg Ile Gln Glu Arg Gly His His Gly Leu 20 25

<210> 153 <211> 956 <212> PRT

<213> Homo sapiens

<400> 153

Met Lys Ala Glu Ile Lys Val Phe Phe Glu Thr Asn Glu Asn Lys Asp 5 10 15

Thr Thr Tyr Gln Asn Leu Trp Asp Thr Phe Lys Ala Val Cys Arg Gly 20 25 30

- Lys Phe Ile Ala Leu Asn Ala His Lys Arg Lys Gln Glu Arg Ser Lys 35 40 45
- Ile Asp Thr Leu Thr Ser Gln Leu Lys Glu Leu Glu Lys Gln Glu Gln 50 55 60
- Thr His Ser Lys Ala Ser Arg Arg Gln Glu Ile Thr Lys Ile Arg Ala 65 70 75 80
- Glu Leu Lys Glu Ile Gln Thr Gln Lys Thr Leu Gln Lys Ile Asn Glu 85 90 95
- Ser Arg Ser Trp Phe Phe Glu Arg Ile Asn Lys Ile Asp Arg Ser Leu 100 105 110
- Ala Arg Leu Ile Lys Lys Lys Arg Glu Lys Asn Gln Ile Asp Thr Ile 115 120 125
- Lys Asn Asp Lys Gly Asp Ile Thr Thr Asp Pro Thr Glu Ile Gln Thr 130 135 140
- Thr Ile Arg Glu Tyr Tyr Lys His Leu Tyr Ala Asn Lys Leu Glu Asn 145 150 155 160
- Leu Glu Glu Met Asp Lys Phe Leu Asp Thr Tyr Thr Leu Pro Arg Leu 165 170 175
- Asn Gln Glu Glu Val Glu Ser Leu Asn Arg Pro Ile Thr Gly Ala Glu 180 185 190
- Ile Val Ala Ile Ile Asn Ser Leu Pro Thr Lys Lys Ser Pro Gly Pro 195 200 205
- Asp Gly Phe Thr Ala Glu Phe Tyr Gln Ser Trp Ala Glu Thr Gln Pro 210 215 220
- Lys Lys Glu Asn Phe Arg Pro Ile Ser Leu Met Asn Ile Asp Ala Lys 225 230 235 240
- Ile Leu Asn Lys Ile Leu Ala Lys Arg Ile Gln Gln His Ile Lys Lys 245 250 255
- Leu Ile His His Asp Gln Val Gly Phe Ile Pro Gly Met Gln Gly Trp 260 265 270
- Phe Asn Ile Arg Lys Ser Ile Asn Val Thr Gln His Ile Asn Arg Ala 275 280 285

Lys	Asp 290	Lys	Asn	His	Met	Ile 295	Ile	Ser	Ile	Asp	Ala 300	Glu	Lys	Ala	Phe
Asp 305	Lys	Ile	Gln	Gln	Pro 310	Phe	Met	Leu	Lys	Thr 315	Leu	Asn	Lys	Leu	Gly 320
Ile	Asp	Gly	Thr	Tyr 325	Phe	Lys	Ile	Ile	Arg 330	Ala	Ile	Tyr	Asp	Asn 335	Pro
Thr	Ala	Asn	Ile 340	Ile	Leu	Asn	Gly	Gln 345	Lys	Leu	Glu	Ala	Phe 350	Pro	Leu
Lys	Thr	Gly 355	Thr	Arg	Gln	Gly	Cys 360	Pro	Leu	Ser	Pro	Leu 365	Leu	Phe	Asn
Ile	Val 370	Leu	Glu	Val	Leu	Ala 375	Arg	Ala	Ile	Arg	Gln 380	Glu	Lys	Glu	Ile
Lys 385	Gly	Ile	Gln	Leu	Gly 390	Lys	Glu	Glu	Val	Lys 395	Leu	Ser	Leu	Phe	Ala 400
Asp	Asn	Met	Ile	Val 405	Tyr	Leu	Glu	Asn	Pro 410	Ile	Val	Ser	Ala	Gln 415	Asn
Leu	Leu	Lys	Leu 420	Ile	Ser	Asn	Phe	Ser 425	Lys	Val	Ser	Gly	Tyr 430	Lys	Ile
Asn	Val	Gln 435	Lys	Ser	Gln	Ala	Phe 440	Leu	Tyr	Thr	Asn	Asn 445	Arg	Gln	Thr
Glu	Ser 450	Gln	Ile	Met	Ser	Gln 455	Leu	Pro	Phe	Thr	Ile 460	Ala	Ser	Lys	Arg
Ile 465	Lys	Tyr	Leu	Gly	Ile 470	Gln	Leu	Thr	Arg	Asp 475	Val	Lys	Asp	Leu	Phe 480
Lys	Glu	Asn	Tyr	Lys 485	Pro	Leu	Leu	Lys	Glu 490	Ile	Lys	Glu	Asp	Thr 495	Asn
Lys	Trp	Lys	Asn 500	Ile	Pro	Cys	Ser	Gly 505	Glu	Gly	Arg	Ile	Asn 510	Ile	Val
Lys	Met	Ala 515	Ile	Leu	Pro	Lys	Glu 520	Leu	Glu	Lys	Thr	Thr 525	Leu	Lys	Phe
Ile	Trp	Asn	Gln	Lys	Arg	Ala	His	Ile	Ala	Lys	Ser	Ile	Leu	Asn	Gln

Lys 545	Asn	Lys	Ala	Gly	Gly 550	Ile	Thr	Leu	Pro	Asp 555	Phe	Lys	Leu	Tyr	Tyr 560
Lys	Ala	Thr	Val	Thr 565	Lys	Thr	Ala	Trp	Tyr 570	Trp	Tyr	Gln	Asn	Arg 575	Asp
Ile	Asp	Gln	Trp 580	Asn	Arg	Thr	Glu	Pro 585	Ser	Glu	Ile	Thr	Gln 590	His	Ile
Tyr	Ser	Tyr 595	Leu	lle	Phe	Asp	Lys 600	Pro	Glu	Lys	Asn	Lys 605	Gln	Trp	Gly
Lys	Asp 610	Ser	Leu	Phe	Asn	Lys 615	Trp	Cys	Trp	Glu	Asn 620	Trp	Leu	Ala	Ile
Cys 625	Arg	Lys	Leu	Lys	Leu 630	Asp	Pro	Phe	Leu	Thr 635	Pro	Tyr	Thr	Lys	Met 640
Asn	Ser	Arg	Trp	Ile 645	Lys	Asp	Leu	Asn	Val 650	Arg	Pro	Lys	Thr	Ile 655	Lys
Thr	Leu	Glu	Glu 660	Asn	Leu	Gly	Ile	Thr 665	Ile	Gln	Asp	Ile	Gly 670	Met	Gly
Lys	Asp	Phe 675	Met	Ser	Lys	Thr	Pro 680	Lys	Ala	Met	Ala	Thr 685	Lys	Asp	Lys
Ile	Asp 690	Lys	Trp	Asp	Leu	Val 695	Lys	Leu	Lys	Ser	Phe 700	Cys	Thr	Ala	Lys
Glu 705	Thr	Thr	Ile	Arg	Val 710	Asn	Arg	Gln	Pro	Thr 715	Lys	Trp	Glu	Lys	Ile 720
Phe	Ala	Thr	Tyr	Ser 725	Ser	Asp	Lys	Gly	Leu 730	Ile	Ser	Arg	Ile	Tyr 735	Asn
Glu	Leu	Lys	Gln 740	Ile	Tyr	Lys	Lys	Lys 745	Thr	Asn	Asn	Pro	Ile 750	Lys	Lys
Trp	Ala	Lys 755	Asp	Met	Asn	Arg	His 760	Phe	Ser	Lys	Glu	Asp 765	Ile	Tyr	Ala
Ala	Lys 770	Lys	His	Met	Lys	Lys 775	Cys	Ser	Ser	Ser	Leu 780	Ala	Ile	Arg	Glu
Met 785	Gln	Ile	Lys	Thr	Thr 790	Met	Arg	Tyr	His	Leu 795	Thr	Pro	Val	Arg	Met 800

- Ala Ile Ile Lys Lys Ser Gly Asn Asn Arg Cys Trp Arg Gly Cys Gly 805 810 815
- Glu Thr Gly Thr Leu Leu His Cys Trp Trp Asp Cys Lys Leu Ala Gln 820 825 830
- Pro Leu Trp Lys Ser Val Trp Arg Phe Leu Arg Asp Leu Glu Leu Glu 835 840 845
- Ile Pro Phe Asp Pro Ala Ile Pro Leu Leu Gly Ile Tyr Pro Lys Asp 850 855 860
- Tyr Lys Ser Cys Cys Tyr Lys Asp Thr Cys Thr Arg Met Phe Ile Ala 865 870 875 880
- Ala Leu Phe Thr Ile Ala Lys Thr Trp Asn Gln Pro Lys Cys Pro Thr . 885 890 895
- Ile Ile Asp Trp Ile Lys Lys Met Trp His Ile Tyr Thr Met Glu Tyr 900 905 910
- Tyr Ala Ala Ile Lys Asn Asp Glu Phe Val Ser Phe Val Gly Thr Trp 915 920 925
- Met Lys Leu Glu Ile Ile Ile Leu Ser Lys Leu Ser Gln Glu Gln Lys 930 935 940
- Thr Thr His Arg Ile Phe Ser Leu Ile Gly Gly Asn 945 950 955
- <210> 154
- <211> 39
- <212> PRT
- <213> Homo sapiens
- <400> 154
- Met Ile Ile Thr Ser Gln Gly Asn Phe Leu Phe Pro Leu Phe Ile Ser 1 5 10 15
- Leu Leu His His Tyr Ser Gln Ser Leu Ser Leu Phe Pro Lys Glu Val
 20 25 30
- Phe His Gly Phe Leu Thr Asp

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<210> 155
<211> 37
<212> PRT
<213> Homo sapiens
<400> 155
Met Val Leu Ser Cys Tyr Ser Leu Val Thr Phe Arg Ser Ser Leu Leu
                  5
Thr Lys Gly Lys Ile Ile Tyr Lys Tyr Gln Met Thr Ile Glu Leu Ser
                                  25
                                                      30
             20 .
Gln Leu Met Phe Phe
         35
<210> 156
<211> 110
<212> PRT
<213> Homo sapiens
<400> 156
Met Gly Cys His Gly Gly Ala Arg Asp Ser Cys Val Asn Arg Glu Cys
                  5
                                      10
Gly Phe Leu Gln Arg Gly Val Trp Arg Trp Thr Ser Arg Ser Phe Trp
             20
                                  25
Ser Leu Arg Glu Gly Gln Gln Ser Ser Arg His Phe Met Asn His Ile
                             40
                                                  45
Leu Ala Val Ala Ala Phe Ala Ser Pro Gly Gly Trp Ser His Ala Leu
                         55
Ala Ala Arg Leu Arg His Pro Pro Val His Ser Val Pro Trp Pro Pro
                     70
                                         75
Ala Val Gly Leu Ala Leu Phe Ser Thr Asn Asn Pro Gln Cys Ile Val
                                                          95
                 85
                                      90
Met Thr Ser Ala Thr Asn Val Asp Val Ser Met Tyr His Ile
                                 105
                                                     110
            100
<210> 157
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<210> 157 <211> 62

<212> PRT

<213> Homo sapiens

<400> 157

Met Gly Ser His Phe Pro Gln Ser Arg Trp His Lys Leu His Glu Val 1 5 10 15

Ala Ala Val Pro Leu His Pro Asp Gln Ser Leu Ala Pro Gln Trp Asn 20 25 30

His Thr Pro Pro Leu Pro Glu Ala Glu Ser Leu Phe Tyr Gly Arg Ala 35 40 45

Ala Ala Leu Gly Thr Phe Leu Asn Ser Pro Val Phe His Leu 50 55 60

<210> 158

<211> 241

<212> PRT

<213> Homo sapiens

<400> 158

Glu Gly Cys Leu Trp Pro Ser Glu Ser Thr Val Ser Gly Asn Gly Ile 1 5 10 15

Pro Glu Cys Pro Cys Cys Trp Asp Pro Pro Cys Arg Arg Ser Ser Ala 20 25 30

Pro Cys Pro Ala Gly Ser Ser Pro Ala Leu Cys Ser Leu His Thr Gly 35 40 45

Ala Arg Thr Leu Pro Leu Phe Gly Gly Gly Arg Pro Gln Val Tyr Ala 50 55 60

Pro Pro Arg Pro Thr Asp Arg Leu Ala Val Pro Pro Phe Ala Gln Arg
65 70 75 80

Glu Arg Phe His Arg Phe Gln Pro Thr Tyr Pro Tyr Leu Gln His Glu 85 90 95

Ile Asp Leu Pro Pro Thr Ile Ser Leu Ser Asp Gly Glu Glu Pro Pro 100 105 110

Pro Tyr Gln Gly Pro Cys Thr Leu Gln Leu Arg Asp Pro Glu Gln Gln
115 120 125

Leu Glu Leu Asn Arg Glu Ser Val Arg Ala Pro Pro Asn Arg Thr Ile 130 135 140

```
Phe Asp Ser Asp Leu Met Asp Ser Ala Arg Leu Gly Gly Pro Cys Pro
                    150
                                         155
Pro Ser Ser Asn Ser Gly Ile Ser Ala Thr Cys Tyr Gly Ser Gly Gly
                165
                                     170
Arg Met Glu Gly Pro Pro Pro Thr Tyr Ser Glu Val Ile Gly His Tyr
            180
                                185
                                                     190
Pro Gly Ser Ser Phe Gln His Gln Gln Ser Ser Gly Pro Pro Ser Leu
                            200
                                                 205
        195
Leu Glu Gly Thr Arg Leu His His Thr His Ile Ala Pro Leu Glu Ser
                        215
                                             220
    210
Ala Ala Ile Trp Ser Lys Glu Lys Asp Lys Gln Lys Gly His Pro Leu
225
                    230
                                         235
Leu
<210> 159
<211> 50
<212> PRT
<213> Homo sapiens
<400> 159
Met Ile His Phe Leu Ser Phe Ser Thr Asn Asn Ala Tyr Ala Leu Asp
                                      10
Leu Pro Glu Tyr Ser Trp Thr Thr Asp Leu Cys Lys Lys Leu Phe Phe
             20
                                  25
Leu Lys Ile Ala Ser Lys Gln Asn Gly Phe Asn Lys Leu Gln Asn Arg
                             40
Gln Pro
     50
<210> 160
<211> 37
<212> PRT
<213> Homo sapiens
```

<400> 160

Met Ile Cys Pro Phe Phe Leu His Ser Phe Thr Ser Ser Ser Phe Tyr

15

Cys Tyr Phe Leu Lys Arg Ile Asn Pro Leu Ala Val Leu Phe Arg Val 20 25 30

Phe Phe Thr Leu Phe 35

<210> 161

<211> 75

<212> PRT

<213> Homo sapiens

<400> 161

IULLUESS .I

Met Leu Val Lys Ser Arg Cys Leu Cys Leu Cys Pro Phe Cys Leu Gly
1 5 10 15

Leu Leu Glu Thr Asp Ala Gly Gly Ser Val Ala Pro His Cys Ser Gly
20 25 30

Tyr Val Pro Trp Ser Gln Ala Leu Leu Leu Leu Arg Ser Leu Leu Glu 35 40 45

Met Gln Asn Leu Arg Pro Asn Ser Arg Pro Met Thr Gln Ser Leu His
50 55 60

Phe Asn Arg Cys Leu Cys Asp Ser Cys Ala Gly
65 70 75

<210> 162

<211> 105

<212> PRT

<213> Homo sapiens

<400> 162

Gln Met Gln Gln Gln Asn Thr Gln Lys Val Glu Ala Ser Lys Val Pro 1 5 10 15

Glu Tyr Ile Lys Lys Ala Ala Lys Lys Ala Ala Glu Phe Asn Ser Asn 20 25 30

Leu Asn Arg Glu Arg Met Glu Glu Arg Arg Ala Tyr Phe Asp Leu Gln 35 40 45

Thr His Val Ile Gln Val Pro Gln Gly Lys Tyr Lys Val Leu Pro Thr 50 55 60

```
Glu Arg Thr Lys Val Ser Ser Tyr Pro Val Ala Leu Ile Pro Gly Gln
                     70
                                          75
 65
Phe Gln Glu Tyr Tyr Lys Ser Ile Ala Ala Phe Ala Leu His Cys Ile
                 85
                                      90
Gly Tyr Trp Ala Gly Val Ser Glu Pro
            100
<210> 163
<211> 44
<212> PRT
<213> Homo sapiens
<400> 163
Met Thr Pro His Cys Pro Gln Asn Arg Leu His Phe Leu Leu Ala Tyr
                                      10
Lys Ala Asn Leu Asn Leu Thr Pro Gly Arg His Pro Ala Thr Val Thr
             20
                                  25
                                                       30
His Ile Leu Val Ile Pro Ser Thr Ile Gly Arg Leu
         35
                              40
<210> 164
<211> 25
<212> PRT
<213> Homo sapiens
<400> 164
Met Thr Met Trp Asn Cys Leu Leu Thr Cys Lys Val Thr His Asn Ile
                  5
                                      10
                                                           15
Met Val Lys Phe Leu Lys Ser Asn Tyr
             20
<210> 165
<211> 67
<212> PRT
<213> Homo sapiens
<400> 165
Met Thr Gly Tyr Cys Met Trp Glu Ile Met Lys Pro Phe Ala Val Ser
                                      10
                                                           15
```

Ser Pro Val Ser Phe Arg Val Ser Val Leu Ser Lys Pro Pro Cys Glu 20 25 30

Val Asn Gln Met Leu Asp Phe Phe Pro Gln Ser His Gln Leu Pro Arg 35 40 45

Glu Arg Asp Thr Tyr Arg Thr Leu Pro Ser Ala Tyr Ser Ser Ser Ala 50 55 60

Pro Ser Thr 65

<210> 166

<211> 42

<212> PRT

<213> Homo sapiens

<400> 166

Met Leu Glu Met Ser Phe Ala Leu Pro Glu Phe Ala Lys Gly Ala His 1 5 10 15

Arg Lys Gln Ile Glu Lys His Pro Leu Gly Thr Ser Leu Gln Cys Leu 20 25 30

Leu Leu Thr Lys Phe Asn Ile Ile Asn Thr
35 40

<210> 167

<211> 47

<212> PRT

<213> Homo sapiens

<400> 167

Met Ala Ser Val Ala Arg Lys Tyr Ala Lys Glu Glu Val Asn Pro Ile 1 5 10 15

Ala Gly Leu Glu Asp Ser Asp Gln Thr Thr Arg Gly Leu Leu Asn Lys 20 25 30

Gly Arg Arg Cys Pro Cys Leu Met Gly Leu Ala Trp Gly Gly Gly 35 40 45

<210> 168

<211> 74

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<212> PRT
<213> Homo sapiens
<400> 168
Met Arg Phe Ser His Phe Phe Pro Val Phe Phe Ile Thr Phe Arg Lys
                                     10
Ala Ile Leu Phe Ser Leu Tyr Thr Thr Cys Thr Leu Leu Val Gly Leu
                                 25
             20
Ile Pro Arg Cys Ile Asn Ile Ile Ala Phe Met Asn Gly Ile Phe Phe
                             40
Ile Val Phe Ser Asn Cys Leu Leu Asp Tyr Met Glu Ile Asp Phe Trp
                         55
                                              60
His Ala Asp Ile Ser Ser Lys Lys Leu Tyr
                     70
<210> 169
<211> 27
<212> PRT
<213> Homo sapiens
<400> 169
Met Thr Lys Tyr Ser Pro Leu Pro Leu Phe Leu His Phe Ile Leu Thr
Thr Ile Phe Phe Leu Ala Pro Phe Pro Leu Phe
             20
                                 25
<210> 170
<211> 54
<212> PRT
<213> Homo sapiens
<400> 170
Met Leu Lys Val Arg Arg Leu Lys Asn Xaa Arg Ala Thr Val Trp Leu
Pro Gly Ile Gly Lys Gln Val Met Asp Phe Ser Leu Lys Gly Glu Ile
             20
                                 25
```

35

Ser Gly Val Gln Leu Gln His Leu Leu Ile Asn Leu Ser Val Cys

45

```
Ala Ser Ser Ser Ile Glu
50
```

<210> 171

<211> 14

<212> PRT

<213> Homo sapiens

<400> 171

Met Pro Thr Gln Arg Gln Pro Leu Ser Ser Gln Ala Val Lys
1 5 10

<210> 172

<211> 42

<212> PRT

<213> Homo sapiens

<400> 172

Met Ala Ala Ser Val Leu Gln Ser Arg Trp Leu Ile Val Ile Leu Val 1 5 10 15

Gln Lys Arg Ile His Thr His Thr Tyr Lys Tyr Val Ser Cys Leu Asp 20 25 30

Pro Gln Glu Phe His Val Ser Leu Tyr Leu 35 40

<210> 173

<211> 121

<212> PRT

<213> Homo sapiens

<400> 173

Met Arg Thr Ser Lys Trp Ile Pro Pro Cys Lys Cys Gly Ala Gly Ala 1 5 10 15

Thr Arg His Cys Ser Gly His Ala Ser Lys Thr Gln Ala Glu Gly Ala
20 25 30

Ala His His Ala Gly Asp Gly Leu Lys Ala Pro Val His Ala Trp Asp
35 40 45

Ser Ala Gln Gly Pro Cys Ser Cys Leu Gly Gln Ala Pro Gly Pro Pro 50 55 60

<220>

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Leu Ala Ala Val Ser Ser Gly Gln Gly Gly Gly Arg Tyr Gly His
                     70
65
Ser Val Gly Arg Ser Trp Glu Asn Lys Ala Tyr Tyr Trp Thr Pro Gly
                 85
                                     90
Gly His Gly Asn His Thr Arg Met Pro Glu Thr Glu Asn Leu Trp Ala
            100
                                105
                                                     110
Ser Arg Ser Ser Ser Ser Cys Thr Gly
        115
                            120
<210> 174
<211> 25
<212> PRT
<213> Homo sapiens
<400> 174
Met Gly Asn Tyr Ala Asn Asn Lys Lys Arg Thr Leu Arg Ser Ile Asn
                                     10
                                                          15
Thr Val His Lys Tyr Gly Gly Leu Phe
             20
<210> 175
<211> 33
<212> PRT
<213> Homo sapiens
<400> 175
Met Pro Ser Phe Arg Ile Leu Asp Thr Cys Cys Phe Ser Pro Ser His
                  5
                                     10
                                                          15
Glu Thr Phe Cys Lys Asn Lys Glu Arg Gly Ile Thr Val Cys His His
                                                      30
             20
                                 25
Ser
<210> 176
<211> 30
<212> PRT
<213> Homo sapiens
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<221> UNSURE
<222> (7)
<220>
<221> UNSURE
<222> (11)
<400> 176
Met Ile Phe Pro Val Lys Xaa Leu Ile Arg Xaa Ile Pro Arg Asn Leu
Leu Tyr Ile Met Asp Phe Asp Ile Tyr Leu Val Lys Val Lys
                                                      30
                                 25
<210> 177
<211> 42
<212> PRT
<213> Homo sapiens
<400> 177
Met Val Ala Ser Val Met Glu Ser Ala Asp Leu Glu Glu Gln Thr Gln
                                     10
Leu Val Thr Glu Leu Pro Gly Gly Arg Leu Ser Leu Gly Met Glu Gly
             20
                                 25
Tyr Arg Asn Phe Arg Val Leu Gln Asn Phe
         35
<210> 178
<211> 80
<212> PRT
<213> Homo sapiens
<400> 178
Met Tyr Phe Pro Pro Ala Phe Phe Phe Pro Phe Glu Tyr Val Ser Leu
                 5
Asn Leu Phe Ser Lys Ser Ala Arg Leu Ala Leu Ser Ser His Phe Leu
                                                      30
             20
                                 25
Ser Leu Ser Ser Ser Tyr Leu Ser Val Phe Phe Leu Leu Val Leu
         35
                             40
Phe Leu Tyr Phe Ser Pro Ser Leu His Ile His His His Lys Gln Thr
```

60

55

Tyr Thr Phe Gln Lys Leu Val Pro Phe Trp Pro Pro Phe Asn Asn Arg 65 70 75 80

<210> 179

<211> 40

<212> PRT

<213> Homo sapiens

<400> 179

Met Arg Val Trp Asp Pro Phe Leu Thr Leu Ile Leu Ile Lys Gln Gln 1 5 10 15

Ile Phe Ile Ile Asn Glu Ile Tyr Asn Tyr Val Asn Leu Ile Asp Ile 20 25 30

Gly Ile Val Ser Arg Ile Phe Ile 35 40

<210> 180

<211> 82

<212> PRT

<213> Homo sapiens

<400> 180

Leu Pro Val Phe Phe Gln Val His Phe Leu Pro Phe Ser Ala Leu Cys
20 25 30

Tyr Asn Ser Glu Thr Asn Ile Phe Gln Leu Ser Cys Phe Leu Asp Phe 35 40 45

Lys Lys Ala Ser Glu Arg His Cys Gly Lys Pro Lys Gly Pro Met Trp 50 55 60

Lys Gln Ala Thr Phe His Leu Leu Arg Leu Ser Ala Ser Ser Ser Ile 65 70 75 80

Cys Ser

```
<210> 181
<211> 23
<212> PRT
<213> Homo sapiens
<400> 181
Met Asp Val Ile Asp Val Pro Lys Glu Ser Val Leu Asn Leu Ile Gln
                                     10
Ser Pro Gly Ser Ser Cys Leu
             20
<210> 182
<211> 95
<212> PRT
<213> Homo sapiens
<400> 182
Met Arg Ser Ala Glu Lys Glu Arg Glu Glu Asn Thr Asn Lys Ser Leu
                 5
                                     10
Ser Ser Leu Ser Pro Val Ser Phe Pro Gln His Val Lys Gly Pro Gly
                             . 25
             20
Pro Lys Phe Pro Leu Pro Cys Val Leu Glu Ala Leu Leu Leu Phe Asn
                             40
Leu Asp Thr Leu Lys Arg Glu Ala Gln Asn Thr Val Thr Val Leu Asn
                        55
                                             60
Ser Lys Pro Cys His Val Thr Ser Leu His Thr Gly Leu Ala Glu Thr
65
                     70
                                        75
                                                              80
Ser Val Gly Lys Gly Ala Ala Glu Asn Ser Val Lys Arg Lys Gln
                 85
                                     90
<210> 183
<211> 31
<212> PRT
<213> Homo sapiens
<400> 183
Met Arg Asn Leu Met Trp Gly Ile Arg Glu Arg Ile Lys Ser Asp Phe
                                     10
```

```
Arg Val Phe Gly Val Ser Ile Trp Lys Ser Glu Val Ala Ile His
             20
                                 25
<210> 184
<211> 54
<212> PRT
<213> Homo sapiens
<400> 184
Met Ser Phe Pro Thr Lys Gln Phe Gly Val Thr Thr Val Ile Pro Val
Ser Tyr Gly Trp Gly Leu Cys Ile Gly Met Cys Thr Leu Lys Phe Ile
                                 25
His Leu Phe Ser Thr Ile Leu Phe Glu His Leu Leu Ser Val Arg Ala
                             40
Leu Ser Val Val Arg Tyr
    50
<210> 185
<211> 13
<212> PRT
<213> Homo sapiens
<400> 185
Met Lys Arg Glu Leu Ser Ile Leu Ile Lys Ser Lys Gly
<210> 186
<211> 51
<212> PRT
<213> Homo sapiens
<400> 186
Lys Ile Gln Ala Lys Gln Ile Lys Lys Arg Ile Gln Arg Ile Ile His
                                      10
```

His Asp Gln Val Gly Phe Ile Pro Gly Ile Gln Gly Trp Phe Asn Ile 25

Ala Lys Ser Ile Asp Glu Thr His Lys Ile Glu Arg Ile Lys Met Arg 40

20

35

<211> 34

```
Ser Leu Met
     50
<210> 187
<211> 14
<212> PRT
<213> Homo sapiens
<400> 187
Met Lys Gly Ser Tyr Leu Ile Pro Asn Phe Leu Leu Glu Pro
                  5
<210> 188
<211> 56
<212> PRT
<213> Homo sapiens
<400> 188
Met Asp Val Ser Ala Cys Gly Arg Leu Tyr Phe Ser Lys Met Thr Thr
Lys Ile Ser Pro Ile Ser Cys Val Ile Leu Gln Trp Gly Leu Cys Pro
                                  25
             20
Leu Phe Leu Asn Val Cys Ala Leu Val Thr Ala Leu Thr Asn Arg Val
                             40
         35
Trp Gly Arg Met Pro Cys Asp Phe
<210> 189
<211> 29
<212> PRT
<213> Homo sapiens
<400> 189
Met Ala Leu Lys Arg Ile Val Ser His Ser Thr Arg Glu Gly Gly Thr
His Leu Glu Arg Cys His Arg Thr Pro Ile Pro Ser Gly
             20
                                  25
<210> 190
```

```
<212> PRT
<213> Homo sapiens
<400> 190
Met Thr Lys Pro Pro Ile Leu Thr Pro Trp Ser Leu Leu Ser Arg Ser
                  5
                                     10
Pro Leu Cys Ser Phe Gln Ser His Glu Glu Gly Glu Gly Arg Pro Arg
             20
                                 25
Gln Gly
<210> 191
<211> 42
<212> PRT
<213> Homo sapiens
<400> 191
Met Pro Glu Ala Leu Pro Gly Pro Gly Arg Ile Lys Ser Leu Thr Val
                                     10
Trp Gly Leu Val Trp Pro Phe Thr His Ile Thr Leu Gln Asn Thr Phe
                                 25
             20
Gln Gly Asp Ile Ser Val Ser Ser Ile Leu
         35
                             40
<210> 192
<211> 59
<212> PRT
<213> Homo sapiens
<400> 192
Met Val Gly His Lys Cys Leu Phe Asn Phe Asp Leu Leu Ala Phe Ser
Ile Gln Ala Val Thr Leu Pro His Lys Thr Leu Gly Ala Leu Ala Arg
                                 25
Gly Asp Cys Thr Ser Ser Pro Gln Met Phe Ser Lys Leu Pro Gly
                             40
Thr Leu Leu Gly Tyr Thr Lys Ser Arg Gln
```

55

```
<210> 193
<211> 87
<212> PRT
<213> Homo sapiens
<400> 193
Arg Gln Cys Leu Ala Leu Ser Pro Arg Leu Glu Cys Ser Gly Thr Ile
                                      10
Ala Ala His Cys Asn Pro Arg Leu Pro Gly Ser Ser Asp Ser Tyr Ala
                                  25
Ser Ala Ser Arg Ala Ala Gly Ile Thr Asp Ala His Gln Asp Thr Gln
                              40
Pro Ile Phe Val Phe Leu Val Glu Met Gly Leu His His Val Cys Gln
                         55
Ala Gly Leu Glu Leu Leu Thr Ser Ser Asp Leu Pro Thr Leu Ala Ser
65
                     70
                                         75
Gln Val Leu Gly Leu Gln Ala
                 85
<210> 194
<211> 117
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> (34)..(72)
<220>
<221> UNSURE
<222> (102)
<220>
<221> UNSURE
<222> (113)
<400> 194
Met Gly Lys Ala Leu Phe Cys Gly Leu Trp Pro Leu Lys Ser Ile Cys
```

Leu Leu Leu Ser Gln Gly Ser Asp Ala Ala Leu Thr Ile Leu Leu

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Val Lys Cys Thr Glu Ala Cys 65 70 75 80

Ile Phe Glu Thr Ser Lys Gly Arg Arg Leu Arg Arg Ser Pro Leu Gln
85 90 95

Gly His Leu His Leu Xaa Tyr Val Ala Phe Pro Ser Asn Asn Glu Ala 100 \$105\$

Xaa His Trp Val Leu 115

<210> 195

<211> 47

<212> PRT

<213> Homo sapiens

<400> 195

Met Trp Val Ala Val Pro Asp Phe Pro Leu Leu Pro Ala Val Gly Asp 1 5 10 15

Glu Leu Leu Ala Leu Gly Pro Asp Phe Pro Gly Trp Pro Leu Arg Ser 20 25 30

Arg Gly Phe Lys Phe Ser Trp Ser Cys Ser Val Leu Val Gln His
35 40 45

<210> 196

<211> 34

<212> PRT

<213> Homo sapiens

<400> 196

Met Phe Ser Leu Thr Pro Leu Glu Lys Ser Pro Ser Trp Leu Leu Ser 1 5 10 15

Gln His Cys Pro Leu Val Ala Cys Ser Pro Trp Cys Phe Leu Ala Val 20 25 30

```
<210> 197
<211> 51
<212> PRT
<213> Homo sapiens
<400> 197
Met Pro Phe Pro Trp Gly Gly Leu Pro Ser Leu Ser Asn Ser Ser Leu
                  5
```

Cys Trp Ser Ser Leu Pro Cys His Ser Thr Leu Ser Phe His Ser Val 20 25

10

15

Cys Trp Tyr Cys Lys Tyr Leu Ile Leu Cys Ile Cys Ser Leu Ser Ala 40

Ser Ser Gln 50

<210> 198 <211> 286 <212> PRT

<213> Homo sapiens

<400> 198

Asn Phe Leu Glu Thr Asp Asn Glu Gly Asn Gly Ile Leu Arg Arg Arg 5 10

Asp Ile Lys Asn Ala Leu Tyr Gly Phe Asp Ile Pro Leu Thr Pro Arg 20 25

Glu Phe Glu Lys Leu Trp Ala Arg Tyr Asp Thr Glu Gly Lys Gly His 40

Ile Thr Tyr Gln Glu Phe Leu Gln Lys Leu Gly Ile Asn Tyr Ser Pro 55

Ala Val His Arg Pro Cys Ala Glu Asp Tyr Phe Asn Phe Met Gly His 65 70 75

Phe Thr Lys Pro Gln Gln Leu Gln Glu Glu Met Lys Glu Leu Gln Gln 95

Ser Thr Glu Lys Ala Val Ala Ala Arg Asp Lys Leu Met Asp Arg His 100 105 110

Gln Asp Ile Ser Lys Ala Phe Thr Lys Thr Asp Gln Ser Lys Thr Asn 115 120 125

Tyr Ile Ser Ile Cys Lys Met Gln Glu Val Leu Glu Glu Cys Gly Cys 130 135 140

Ser Leu Thr Glu Gly Glu Leu Thr His Leu Leu Asn Ser Trp Gly Val 145 150 155 160

Ser Arg His Asp Asn Ala Ile Asn Tyr Leu Asp Phe Leu Arg Ala Val 165 170 175

Glu Asn Ser Lys Ser Thr Gly Ala Gln Pro Lys Glu Lys Glu Glu Ser 180 185 190

Met Pro Ile Asn Phe Ala Thr Leu Asn Pro Gln Glu Ala Val Arg Lys 195 200 205

Ile Gln Glu Val Val Glu Ser Ser Gln Leu Ala Leu Ser Thr Ala Phe 210 215 220

Ser Ala Leu Asp Lys Glu Asp Thr Gly Phe Val Lys Ala Thr Glu Phe 225 230 235 240

Gly Gln Val Leu Lys Asp Phe Cys Tyr Lys Leu Thr Asp Asn Gln Tyr 245 250 255

His Tyr Phe Leu Arg Lys Leu Arg Ile His Leu Thr Pro Tyr Ile Asn 260 265 270

Trp Lys Tyr Phe Leu Gln Asn Phe Ser Cys Phe Leu Glu Glu 275 280 285

<210> 199

<211> 64

<212> PRT

<213> Homo sapiens

<400> 199

Met Ser Gln Gln Gly Phe Phe Arg Leu Phe Gly Ile Tyr Ser Leu Pro 1 5 10 15

Ala Arg Pro Val Asn Ser Ser Arg Phe Ser Val Ser Phe Gln Ile Gly
20 25 30

Thr Thr Arg Asn His Gln Leu Leu Ser Tyr Thr Leu Asp Met Leu His
35 40 45

His Phe Asp Val Val Gly Phe Asp Tyr Tyr Lys Ile Asp Pro Asn Tyr 50 55 60

<210> 200

<211> 35

<212> PRT

<213> Homo sapiens

<400> 200

Met Asn Lys Ile Ser Cys Phe Asn Glu Ala Asn Met Thr Ile Gln Gln 1 5 10 15

Cys Gly Phe Gly Ile Arg Lys Ile Leu Lys Ile Leu Ile Val Ser Phe 20 25 30

Ser Leu Pro

<210> 201

<211> 66

<212> PRT

<213> Homo sapiens

<400> 201

Met Ser Leu Ile Leu Thr Phe His Leu Leu Leu Thr Arg Gln Ala Leu
1 5 10 15

Ser Pro Leu Thr Trp Ile Thr Glu Leu Thr Ser Glu Leu Gln Val Val 20 25 30

Ala Ser Ser Gly Pro Val Pro Ser Val Leu Phe Leu Pro Ala Arg Ile
35 40 45

Thr Cys Arg Ala Asp Arg Leu Phe Ala His Gly Leu His Lys Ala Ser 50 55 60

Arg Ala

65

```
<210> 202
<211> 27
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> (16)
<220>
<221> UNSURE
<222> (20)
<400> 202
Met Tyr Ala Thr Lys Lys His Val Ser Met Cys Val Asn Leu Lys Xaa
                                      10
Ile Asn Gly Xaa Phe Trp Glu Val Phe Arg Ser
             20
<210> 203
<211> 47
<212> PRT
<213> Homo sapiens
<400> 203
Met Pro Cys Leu Phe Ser Thr Ser Thr Phe Asn Phe Leu Thr Lys Ile
Lys Cys Tyr Val Phe Ser Lys Ala Asp Leu Leu Pro Ser Ser Leu Ser
                                  25
Phe Gly Ser Ser His Tyr Gln His Ser His Pro Pro Thr Leu Lys
         35
                              40
<210> 204
<211> 19
<212> PRT
<213> Homo sapiens
<400> 204
Met His Gln Ser Val Ser Leu Arg Thr Ala Trp Ala Arg His Gly Trp
                                      10
Ser Arg Leu
```

```
<210> 205
<211> 22
<212> PRT
<213> Homo sapiens
<400> 205
Met Lys Ile Gln Gly Lys Asn Ile Tyr Asn Thr Thr Met Leu Lys Asp
                  5
                                      10
Pro Phe Phe Tyr Leu Thr
             20
<210> 206
<211> 29
<212> PRT
<213> Homo sapiens
<400> 206
Met Lys Phe His Ser Asp Pro Ser Cys Val Pro Ser Ile Gln Ile Asn
                  5
                                      10
                                                          15
Lys Arg Asp Tyr Arg Arg Gly Pro Leu Arg Leu Ala Asn
                                 25
             20
<210> 207
<211> 21
<212> PRT
<213> Homo sapiens
<400> 207
Met Leu Pro Pro Tyr Leu Pro Lys Leu Leu Gln Phe Val Phe Leu
                                      10
                                                          15
Pro Val Ile Tyr Lys
             20
<210> 208
<211> 29
<212> PRT
<213> Homo sapiens
<400> 208
```

Met Arg Asn Val Gln Arg Lys Phe Tyr Asn Lys Arg Val Gln Gln Gly
1 5 10 15

Cys Lys Ile Lys Asp Lys His Ile Asn Ser Ser Cys Ile
20 25

<210> 209

<211> 42

<212> PRT

<213> Homo sapiens

<400> 209

Met Glu Leu Pro Leu Phe Ser Leu Ser Cys Ser Tyr Lys Pro Cys Ala 1 5 10 15

Phe Phe Asp His Ser Thr Ala Thr Ala Ala Leu Val Met Pro Phe Leu 20 25 30

Ile Ile Pro Gly Ser His Thr Thr Arg Pro 35 40

<210> 210

<211> 18

<212> PRT

<213> Homo sapiens

<400> 210

Met Gly Tyr Leu Gly Leu Gly Met Ala Ala Gly Phe Lys Glu Arg Val 1 5 10 15

Val Glu

<210> 211

<211> 70

<212> PRT

<213> Homo sapiens

<400> 211

Met Glu Leu Leu Gly Ser Asp Arg Ser Pro Val Ser Phe Leu Ile His
1 5 10 15

Trp Leu Pro Thr Arg Leu Pro His Gly Val Ser Leu Gly Ser Arg Leu 20 25 30

Ser Ile Leu Ser Thr Phe Thr Tyr Val Asp Trp Leu Ala Glu Val Ser
35 40 45

Thr Leu Gly Leu Asp Trp Lys Ile Leu Gln Thr Lys Lys Ala Arg Asp 50 55 60

Ser Val Pro Pro Thr Ser 65 70

<210> 212

<211> 44

<212> PRT

<213> Homo sapiens

<400> 212

Met Ala Asp Phe Asn Trp Met Leu Tyr Leu Gly Phe Ser Lys Ala Lys 1 5 . 10 15

Lys Val Tyr Thr Leu Leu Gl
n Leu Gly Val Gly Leu Gl
n Ala Val Cys 20 25, 30

Tyr Ile His Val Leu Val Pro Val Ile Leu Thr Phe 35 40

<210> 213

<211> 71

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> (3)

<220>

<221> UNSURE

<222> (14)

<400> 213

Met Cys Xaa Leu Gln Thr Val Tyr Ser Trp Thr Leu Leu Xaa Tyr Phe 1 5 10 15

Asn Pro Ser Asp Asn Leu Cys Ile Leu Ile Arg Phe Leu Asn Pro Phe 20 25 30

Thr Phe Asn Val Met Phe Asp Ile Ser Trp Ile Tyr Ser Cys His Phe 35 40 45

```
Thr Phe Gly Leu Leu Cys Leu Met Tyr Phe Ser Val Leu Leu Phe Leu
     50
Pro Tyr Cys Phe Leu Leu His
                     70
 65
<210> 214
<211> 22
<212> PRT
<213> Homo sapiens
<400> 214
```

Met Thr Arg Ile Cys Cys Lys Ile His Phe Leu Lys Cys Leu Lys Lys 5 15

Glu Met Glu Ile Ser Ser 20

<210> 215 <211> 55 <212> PRT <213> Homo sapiens

<400> 215

Met Phe Ser Met Leu Arg Tyr Cys Tyr Gln Cys Pro Leu Pro Leu Lys 15 5 10

Met Thr Ala Glu Ser Lys His Phe Pro Glu Asn Ser Tyr Thr Gln Ile 20 25

Phe Val Pro Leu Phe Phe Tyr Thr Ala Pro Cys Leu Phe Ile Ser Val 45 35 40

His Ser Ser Tyr His Met Leu 50

<210> 216 <211> 49 <212> PRT

<213> Homo sapiens

<400> 216

Met Pro Ser Ala Phe Glu Asn Asp Cys Arg Ile Gln Thr Phe Ser Arg 5 10 15

```
Lys Leu Leu Tyr Ile Asp Leu Cys Ser Phe Ile Leu Leu His Ser Thr 20 25 30
```

Leu Phe Val His Lys Cys Ser Gln Leu Ile Ser His Val Val Ile Met $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Cys

<210> 217 <211> 62

<212> PRT

<213> Homo sapiens

<400> 217

Met Glu Arg Cys Ala Gly Ser Glu Pro Ala Arg Lys Glu Asn Ile Ser 1 5 10 15

Arg Leu Phe Cys Arg Met Gln Asn Trp Val Tyr Leu Gln Thr Asp Val
20 25 30

Leu Pro Ser Lys Gly Leu Ala Thr Thr Phe Asp Pro Gln Ser Lys Val 35 40 45

Asn Thr Ala Ile His Cys Ser Gln Thr Arg Val His Leu Pro 50 55 60

<210> 218

<211> 29

<212> PRT

<213> Homo sapiens

<400> 218

Met Thr Thr Ser Ser Arg Thr Ile Ile Gly Lys Ile Gln Asp Leu Ser 1 5 10 15

Val Leu Ser Thr Val Ser Gln Ile Ser Asp Arg Pro Arg
20 25

<210> 219

<211> 28

<212> PRT

<213> Homo sapiens

```
<400> 219
Met Gly Phe Tyr His Lys Gly Met Ser Glu Thr Phe Ile Cys Ala Gly
                                                          15
                                     10
Thr Ser Ala Gln Ser Leu Asn Ala Val Ser Glu Cys
                                 25
             20
<210> 220
<211> 56
<212> PRT
<213> Homo sapiens
<400> 220
Met Phe Ala Ser Glu Phe Phe Phe Leu Val Ile Cys Leu Val Trp Asp
                  5
                                     10
                                                          15
His Val Ala Phe Phe Ser Leu Thr Arg Val Ile Lys Val His Thr Val
             20
                                 25
Lys Ser Met Arg Ser Lys Ala Leu Arg Arg Leu Leu Ser Val Asn .
                             40
                                                 45
Val Met Ala Gly Ala Ile Arg Leu
```

<210> 221 <211> 97 <212> PRT <213> Homo sapiens

<400> 221

Arg Ala Arg Ala Glu Ala Ala Arg Ala Arg Gly Glu Val Cys Phe His 10

Cys Arg Lys Pro Gly His Gly Ile Ala Asp Cys Pro Ala Ala Leu Glu 20 25

Asn Gln Asp Met Gly Thr Gly Ile Cys Tyr Arg Cys Gly Ser Thr Glu

His Glu Ile Thr Lys Cys Lys Ala Lys Val Asp Pro Ala Leu Gly Glu 50 55

Phe Pro Phe Ala Lys Cys Phe Val Cys Gly Glu Met Gly His Leu Ser 70 65

Arg Ser Cys Pro Asp Asn Pro Lys Gly Leu Tyr Ala Asp Gly Lys Tyr 85 90 Cys <210> 222 <211> 36 <212> PRT <213> Homo sapiens <220> <221> UNSURE <222> (30) <220> <221> UNSURE <222> (33) <400> 222 Met Ser Glu Ala Ser Leu Ser Leu Lys Glu Gln Lys Phe Cys His Pro 5 Val Val Leu Tyr Asn Leu Glu Asn Pro Leu Asn Leu Thr Xaa Leu Gln 30 25 Xaa Tyr Leu Leu 35 <210> 223 <211> 65 <212> PRT <213> Homo sapiens <400> 223

Met Leu Cys Gly Val Leu Cys Trp Gly Trp Gly Cys Gln Asp Glu Lys
1 5 10 15

Gln Pro Cys Gly Cys Ala Leu Gly Phe Thr Ser Gln Thr Ser Val Ala 20 25 30

Phe Ala Arg Arg Lys Asp Ser Gln Gly Leu His Ile Cys Cys Pro Gln 35 40 45

Phe Cys Pro Phe Ser Asn Lys Ser His Thr Ser Asn Leu Leu Val Ala 50 55 60

Н	i	s
	6	5

<2	1	0>	224	

<211> 804

<212> PRT

<213> Homo sapiens

<400> 224

Ala Lys Pro Leu Thr Asp Gln Glu Lys Arg Arg Gln Ile Ser Ile Arg 1 5 10 15

Gly Ile Val Gly Val Glu Asn Val Ala Glu Leu Lys Lys Ser Phe Asn
20 25 30

Arg His Leu His Phe Thr Leu Val Lys Asp Arg Asn Val Ala Thr Thr 35 40 45

Arg Asp Tyr Tyr Phe Ala Leu Ala His Thr Val Arg Asp His Leu Val 50 55 60

Gly Arg Trp Ile Arg Thr Gln Gln His Tyr Tyr Asp Lys Cys Pro Lys 65 70 75 80

Arg Val Tyr Tyr Leu Ser Leu Glu Phe Tyr Met Gly Arg Thr Leu Gln
85 90 95

Asn Thr Met Ile Asn Leu Gly Leu Gln Asn Ala Cys Asp Glu Ala Ile 100 105 110

Tyr Gln Leu Gly Leu Asp Ile Glu Glu Leu Glu Glu Ile Glu Glu Asp 115 120 125

Ala Gly Leu Gly Asn Gly Gly Leu Gly Arg Leu Ala Ala Cys Phe Leu 130 135 140

Asp Ser Met Ala Thr Leu Gly Leu Ala Ala Tyr Gly Tyr Gly Ile Arg 145 150 155 160

Tyr Glu Tyr Gly Ile Phe Asn Gln Lys Ile Arg Asp Gly Trp Gln Val 165 170 175

Glu Glu Ala Asp Asp Trp Leu Arg Tyr Gly Asn Pro Trp Glu Lys Ser 180 185 190

Arg Pro Glu Phe Met Leu Pro Val His Phe Tyr Gly Lys Val Glu His

195 200 205

Thr	Asn 210	Thr	Gly	Thr	Lys	Trp 215	Ile	Asp	Thr	Gln	Val 220	Val	Leu	Ala	Leu
Pro 225	Tyr	Asp	Thr	Pro	Val 230	Pro	Gly	Tyr	Met	Asn 235	Asn	Thr	Val	Asn	Thr 240
Met	Arg	Leu	Trp	Ser 245	Ala	Arg	Ala	Pro	Asn 250	Asp	Phe	Asn	Leu	Arg 255	Asp
Phe	Asņ	Val	Gly 260	Asp	Tyr	Ile	Gln	Ala 265	Val	Leu	Asp	Arg	Asn 270	Leu	Ala
Glu	Asn	Ile 275	Ser	Arg	Val	Leu	Tyr 280	Pro	Asn	Asp	Asn	Val 285	Ala	Ile	Gln
Leu	Asn 290	Asp	Thr	His	Pro	Ala 295	Leu	Ala	Ile	Pro	Glu 300	Leu	Met	Arg	Ile
Phe 305	Val	Asp	Ile	Glu	Lys 310	Leu	Pro	Trp	Ser	Lys 315	Ala	Trp	Glu	Leu	Thr 320
Gln	Lys	Thr	Phe	Ala 325	Tyr	Thr	Asn	His	Thr 330	Val	Leu	Pro	Glu	Ala 335	Leu
Glu	Arg	Trp	Pro 340	Val	Asp	Leu	Val	Glu 345	Lys	Leu	Leu	Pro	Arg 350	His	Leu
Glu	Ile	Ile 355	Tyr	Glu	Ile	Asn	Gln 360	Lys	His	Leu	Asp	Arg 365	Ile	Val	Ala
Leu	Phe 370	Pro	Lys	Asp	Val	Asp 375	Arg	Leu	Arg	Arg	Met 380	Ser	Leu	Ile	Glu
Glu 385	Glu	Gly	Ser	Lys	Arg 390	Ile	Asn	Met	Ala	His 395	Leu	Cys	Ile	Val	Gly 400
Ser	His	Ala	Val	Asn 405	Gly	Val	Ala	Lys	Ile 410	His	Ser	Asp	Ile	Val 415	Lys
Thr	Lys	Val	Phe 420	Lys	Asp	Phe	Ser	Glu 425	Leu	Glu	Pro	Asp	Lys 430	Phe	Gln
Asn	Lys	Thr 435	Asn	Gly	Ile	Thr	Pro 440	Arg	Arg	Trp	Leu	Leu 445	Leu	Cys	Asn
Pro	Gly	Leu	Ala	Glu	Leu	Ile	Ala	Glu	Lys	Ile	Gly	Glu	Asp	Tyr	Val

450	455	460

Lys 465	Asp	Leu	Ser	Gln	Leu 470	Thr	Lys	Leu	His	Ser 475	Phe	Leu	Gly	Asp	Asp 480
Val	Phe	Leu	Arg	Glu 485	Leu	Ala	Lys	Val	Lys 490	Gln	Glu	Asn	Lys	Leu 495	Lys
Phe	Ser	Gln	Phe 500	Leu	Glu	Thr	Glu	Tyr 505	Lys	Val	Lys	Ile	Asn 510	Pro	Ser
Ser	Met	Phe 515	Asp	Val	Gln	Val	Lys 520	Arg	Ile	His	Glu	Tyr 525	Lys	Arg	Gln
Leu	Leu 530	Asn	Cys	Leu	His	Val 535	Ile	Thr	Met	Tyr	Asn 540	Arg	Ile	Lys	Lys
Asp 545	Pro	Lys	Lys	Leu	Phe 550	Val	Pro	Arg	Thr	Val 555	Ile	Ile	Gly	Gly	Lys 560
Ala	Ala	Pro	Gly	Tyr 565	His	Met	Ala	Lys	Met 570	Ile	Ile	Lys	Leu	Ile 575	Thr
Ser	Val	Ala	Asp 580	Val	Val	Asn	Asn	Asp 585	Pro	Met	Val	Gly	Ser 590	Lys	Leu
Lys	Val	Ile 595	Phe	Leu	Glu	Asn	Tyr 600	Arg	Val	Ser	Leu	Ala 605	Glu	Lys	Val
Ile	Pro 610	Ala	Thr	Asp	Leu	Ser 615	Glu	Gln	Ile	Ser	Thr 620	Ala	Gly	Thr	Glu
Ala 625	Ser	Gly	Thr	Gly	Asn 630	Met	Lys	Phe	Met	Leu 635	Asn	Gly	Ala	Leu	Thr 640
Ile	Gly	Thr	Met	Asp 645	Gly	Ala	Asn	Val	Glu 650	Met	Ala	Glu	Glu	Ala 655	Gly
Glu	Glu	Asn	Leu 660	Phe	Ile	Phe	Gly	Met 665	Arg	Ile	Asp	Asp	Val 670	Ala	Ala
Leu	Asp	Lys 675	Lys	Gly	Tyr	Glu	Ala 680	Lys	Glu	Tyr	Tyr	Glu 685	Ala	Leu	Pro
Glu	Leu 690	Lys	Leu	Val	Ile	Asp 695	Gln	Ile	Asp	Asn	Gly 700	Phe	Phe	Ser	Pro
Lys	Gln	Pro	Asp	Leu	Phe	Lys	Asp	Ile	Ile	Asn	Met	Leu	Phe	Tyr	His

```
Asp Arg Phe Lys Val Phe Ala Asp Tyr Glu Ala Tyr Val Lys Cys Gln 725 730 735
```

Asp Lys Val Ser Gln Leu Tyr Met Asn Pro Lys Ala Trp Asn Thr Met 740 745 750

Val Leu Lys Asn Ile Ala Ala Ser Gly Lys Phe Ser Ser Asp Arg Thr 755 760 765

Ile Lys Glu Tyr Ala Gln Asn Ile Trp Asn Val Glu Pro Ser Asp Leu 770 775 780

Lys Ile Ser Leu Ser Asn Glu Ser Asn Lys Val Asn Gly Asn Asn Lys 785 790 795 800

Val Asn Gly Asn

<210> 225

<211> 60

<212> PRT

<213> Homo sapiens

<400> 225

Met Gly Asp Leu Tyr Lys Lys Glu Leu Lys Lys Arg Arg Asn Val Ile 1 5 10 15

Ser Met Leu Gln Val Lys Gly Lys Gln Glu Asp Lys Tyr His Lys
20 25 30

Lys Thr Lys Met Tyr Leu Thr Phe Trp Asp Lys Ile Val Gly Ser Thr 35 40 45

Glu Asn Trp Asn Leu Glu Leu Pro Val Pro Gln Arg
50 55 60

<210> 226

<211> 46

<212> PRT

<213> Homo sapiens

<400> 226

Met Phe Tyr Glu Tyr Lys Glu Tyr Asn Glu Cys Tyr Tyr Lys Tyr Ile 1 5 10 15 His Ala Asn Arg Asp Phe Gln Tyr Pro Thr Phe Ser Gln Phe Arg Leu 20 25 30

Pro Glu Ile Gly Leu Leu Gly Gln Arg Leu Gln Thr Tyr Phe 35 40 45

<210> 227

<211> 13

<212> PRT

<213> Homo sapiens

<400> 227

Met Arg Arg Trp Tyr Ile Trp Glu Val Ser Arg Gly Tyr $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 228

<211> 27

<212> PRT

<213> Homo sapiens

<400> 228

Met Phe Leu Arg Tyr Leu Gly Lys Ser Ser Glu Pro Cys Val Ala Asn 1 5 10 15

Gly Asn Ala Val Val Gln Trp Gly Leu Leu Gly
20 25

<210> 229

<211> 45

<212> PRT

<213> Homo sapiens

<400> 229

Met Ala Thr Asn Ser Cys Leu Tyr Ser Thr His Lys Gln Phe Gln Tyr
1 5 10 15

Met Phe Cys Asp Arg Ser Pro Lys Ile Ser Ser Phe Met Val Pro Gly
20 25 30

Arg Thr Glu Asn Ser Arg Met Gln Leu Leu Lys Leu Phe
35 40 45

<210> 230

<211> 96

<212> PRT

<213> Homo sapiens

<400> 230

Lys Arg Gln Gly Leu Ala Leu Ser Pro Arg Leu Glu Tyr Asn Asp Val 1 5 10 15

Ile Ile Ala His Arg Asn Phe Glu Leu Pro Gly Ser Ser Asn Pro Ser 20 25 30

Ala Ser Ala Ser Gln Glu Leu Gly Leu Gln Thr Cys Ala Thr Thr Ser 35 40 45

Ser Phe Phe Ile Phe Cys Arg Gly Arg Val Ser Leu Cys Cys Pro Gly 50 55 60

Gly Val Ser His Ser Thr Ser Ser Asn Pro Thr Ala Ser Ala Ser Gln 65 70 .75 80

Arg Ala Arg Ile Thr Gly Leu Ser His Cys Thr Gln Pro Lys Ala Leu $85 \ 90 \ 95$

<210> 231

<211> 56

<212> PRT

<213> Homo sapiens

<400> 231

Met Leu Ala Leu Ser His Trp Thr Val Val Pro Ser His Pro Leu Ser 1 5 10 15

Pro Ser Leu Asp His Glu His Ser Arg Ala Arg Thr Thr Ser Val Leu 20 25 30

Phe Thr Ala Val His Pro Ala Leu Thr Gln Cys Leu Met His Ala Leu 35 40 45

Gly Ala Gln Glu Val Leu Ile Gln 50 55

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<211> 34

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<213> Homo sapiens

<400> 232

Met Asp Ser Pro Lys Arg Val Ser Ser Asp Leu Ser Leu Leu Arg Asn 1 5 10 15

Lys Ile Leu Asp Ser Gly Cys Val Cys Phe Arg Cys Cys Gly Thr Gly 20 25 30

Trp Phe

<210> 233

<211> 34

<212> PRT

<213> Homo sapiens

<400> 233

Met Leu Ser Ala Phe Phe Thr Leu Ile Leu Ser Pro Val Tyr Arg Arg
1 5 10 15

Val Phe Gln Arg Leu His Met Arg Tyr Leu Asn Lys Leu Lys Ala Glu 20 25 30

Glu Ile

<210> 234

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<400> 234

Met Cys Phe Glu Thr Gly Glu Tyr Ser Trp Ser Gly Ala Gly Ala Gln
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Asn Thr Arg Phe Leu Cys Ser Asp Asn Leu Cys Ser Leu Ala Leu Leu 20 25 30

Leu Ile Tyr 35

<210> 235

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Met Ile Asn Glu Gln Met Asn Ile Ser Glu Lys Leu Val Tyr Ile Ile 1 5 10 15

Met Asn Arg Leu Val Leu His Phe Tyr Lys Asn Arg Lys Leu Lys Ile 20 25 30

Lys Lys Lys Ile Leu Pro Lys Lys 35 40

<210> 236

<211> 60

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<213> Homo sapiens

<400> 236

Met Tyr Lys Cys Leu Leu Glu Ala His Glu Val Tyr Arg Trp Phe Leu 1 5 10 15

Pro Gln Tyr Leu Thr Ile Val Lys Phe Gln Ala Met Pro Leu Leu Ser 20 25 30

Thr Thr Phe Ser Leu Arg Ser Thr Gly Ile Trp Leu Arg Phe His Ser 35 40 45

Asp Asp Leu Leu Ser Glu Thr Leu Arg Leu Glu Lys
50 . 55 60

<210> 237

<211> 36

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<400> 237

Met Ser Leu Tyr Leu Phe Ser Pro Phe His Cys Pro Phe Phe Pro 1 5 10 15

His Leu Pro Leu Cys Ser Val Leu Ser Leu Ala Ser Ser Cys Gln Tyr
20 25 30

Val Asp Phe Cys

35

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Met Asn Asn Ile Ile Pro Leu Leu Ile Leu Met Gly Leu Phe Phe Leu 1 5 10 15

Ser Gln Ser Ala Leu Ile His Ile Gly Ser Leu Asn Ser Ser Asn Ile 20 25 30





Ile Lys Ser Phe Ser Pro Arg Asp Pro Thr Phe Arg 35 40